

REMARKS

Applicant has amended the application to more clearly define the subject matter of the presently claimed invention, including the addition of new dependent claims 7-18. Support for the new claims is found in the specification, as filed (see, e.g., paragraphs 68-83). In addition, the claim amendments with respect to claims 1-6 find support in the specification, as filed. Of note, applicant has addressed the editorial error in dependent claim 2, thereby obviating the Section 112 rejection associated therewith. Accordingly, applicant respectfully submits that no new matter is introduced by way of the proposed claim amendments, and prompt entry thereof is respectfully requested. Reconsideration and withdrawal of the Section 112 rejection of claim 2 are also requested.

In the outstanding Office Action, claims 1-5 stand rejected under 35 USC §102(b) based on U.S. Patent No. 4,837,484 to Eliasson et al. Claim 6 stands rejected under 35 USC §103(a) based on the Eliasson '484 patent in view of U.S. Patent No. 5,433,738 to Stinson. Reconsideration of the subject application in view of the claim amendments and remarks presented herein is respectfully requested.

The Eliasson '484 patent describes a series of radiator systems for generating and delivering UV radiation. While the systems disclosed in Figs. 1-5 differ in certain structural respects, none of the Eliasson '484 systems teaches or suggests applicant's non-laser light source assembly, as presently claimed. More particularly, the Eliasson '484 patent fails to teach or suggest a radiation system wherein:

1. at least a portion of the outer wall of the radiation system is substantially transparent to photons produced by a bounded volume of gas, and
2. the substantially transparent portion of the outer wall is temperature-controlled through direct contact of a cooling fluid with the inner face thereof.

Indeed, to the extent that the Eliasson '484 patent concerns itself with cooling issues, Eliasson et al. limit their consideration to cooling of the light source. Thus, with reference to Fig. 1 of the Eliasson '484 patent, cooling medium 2 is adjacent electrode 1 and far removed from the exit region for the emerging radiation rays (shown exiting through wire gauze 6). Similarly, with reference to Fig. 2 of the Eliasson '484 patent, liquid 13 represents the fluid to be radiated. Thus, to the extent liquid 13 absorbs heat, it

runs the risk of inflicting heat-related damage to such fluid. In the embodiment of Fig. 2, Eliasson fails to teach or suggest a design whereby a cooling fluid would be provided in “direct contact with the inner face” of the outer housing (through which the radiation passes). Rather, Eliasson et al. teach the positioning of discharge space 12 in direct contact with the “inner face” of dielectric tube 9. With reference to Fig. 3 of the Eliasson ‘484 patent, although the overall orientation is reversed, for purposes of the present analysis, the design is identical to that of Fig. 2 (with discharge space 12 adjacent the “inner face” and internal space 16 for receiving the fluid to be treated). Fig. 4 of the Eliasson ‘484 patent is identical to Fig. 1 and Fig. 5 is analogous to the designs of Figs. 2 and 3 for purposes of the present analysis.

Contrary to the teachings of the Eliasson ‘484 patent, applicant has recognized the importance of placing a cooling fluid in direct contact with the inner face of a housing, where the material/fluid to be treated will be positioned against the outer face thereof. In this way, the material/fluid to be treated will be temperature-controlled, without negatively impacting on the delivery of photons/energy to such material/fluid for treatment thereof. Of note, cooling of the light source is a separate issue, as further evidenced by the recitations of dependent claim 16.

For at least the foregoing reasons, applicant respectfully submits that amended claims 1-5 patentably distinguish over the Eliasson ‘484 patent. Reconsideration and withdrawal of the Section 102 rejection are earnestly solicited.

With reference to the Section 103 rejection of claim 6, applicant respectfully submits that the Stinson ‘738 patent fails to cure the deficiencies noted above with respect to the Eliasson ‘484 patent. Thus, applicant submits that dependent claim 6 patentably distinguishes over the art of record, including specifically a combination of the Eliasson ‘484 and Stinson ‘738 patents, for at least the reasons noted above with respect to independent claim 1. Reconsideration and withdrawal of the outstanding obviousness rejection of dependent claim 6 are respectfully requested.

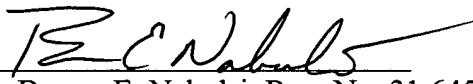
Finally, with reference to new claims 7-18, applicant respectfully submits that each of such dependent claims patentably distinguishes over the art of record for at least the reasons noted above with respect to independent claim 1. Applicant expressly

reserves the right to separately argue the patentability of each of the foregoing dependent claims in future prosecution of this application.

With reference to the initialed Forms PTO-1449 appended to the current Office Action, applicant notes that the examiner has apparently not considered the non-patent art submitted with applicant's IDS dated February 17, 2004. Applicant requests clarification as to the circumstances giving rise to the examiner's non-consideration of such art. If the art was lost by the PTO, applicant requests an opportunity to submit fresh copies of the non-patent art identified in the IDS submitted in February, 2004 for consideration in connection with this application. Applicant respectfully submits that a resubmission of such art should be deemed timely by the PTO in view of the PTO's apparent failure to connect the prior submission – in its entirety – with this application.

Applicant respectfully submits that all claims are now in condition for allowance. Prompt action leading to an early Notice to this effect is earnestly solicited. If the examiner believes that prosecution of this application may be advanced through a telephone discussion with applicant's counsel, he is invited to contact applicant's attorney at the number set forth below.

Respectfully submitted,

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